

Capstone Project – The Battle of Neighborhoods

Introduction

The Gym, Health and Fitness Clubs industry in New York has benefited in recent years from increased awareness about the benefits of exercise. Over the five years to 2018, powered by strong growth in per capita disposable income, industry revenue is expected to increase at an annualized rate of 0.8% to reach \$3.1 billion, including an increase of 1.4% in 2018 alone [1]. In terms of such tremendous market potential, gym industry is attracting more and more value investors to make investments, especially in the New York City, which is the most populous city with the largest population in the United States.

Before entrepreneurs to start their business in the Gym, Health and Fitness Clubs industry, they need to find out where they would open it? What would they consider when selecting a location? By exploring gyms, fitness clubs in major parts of New York City, this project is to figure out whether the neighborhood of gyms and fitness clubs is an essential factor for the success of a gym with sound analysis.

Data

For this project, the following data was utilized:

- **New York City geographical data:** contains information of Boroughs, Neighborhoods along with their latitude and longitude. This dataset is used to explore the neighborhoods of New York City and exists for free on the web (https://cocl.us/new_york_dataset).
- **Foursquare API:** by using this API, we can get all the venues in each neighborhood and filter these venues to get gym and fitness clubs.